

Determination of Antioxidant Activity in *Raphanus raphanistrum* L.

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Abstract : Antioxidants are compounds or systems that can safely interact with free radicals and terminate the chain reaction before vital molecules are damaged. The anti-oxidative effectiveness of these compounds depends on their chemical characteristics and physical location within a food (proximity to membrane phospholipids, emulsion interfaces, or in the aqueous phase). Antioxidants (e.g., flavonoids, phenolic acids, tannins, vitamin C, vitamin E) have diverse biological properties, such as antiinflammatory, anti-carcinogenic and anti-atherosclerotic effects, reduce the incidence of coronary diseases and contribute to the maintenance of gut health by the modulation of the gut microbial balance. Plants are excellent sources of antioxidants especially with their high content of phenolic compounds. *Raphanus raphanistrum* L., the wild radish, is a flowering plant in the family Brassicaceae. It grows in Asia and Mediterranean region. It has been introduced into most parts of the world. It spreads rapidly, and is often found growing on roadsides or in other places where the ground has been disturbed. It is an edible plant, in Turkey its fresh aerial parts are mostly consumed as a salad with olive oil and lemon juice after boiled. The leaves of the plant are also used as anti-rheumatic in traditional medicine. In this study, we determined the antioxidant capacity of two different solvent fractions (methanol and ethyl acetate) obtained from *Raphanus raphanistrum* L. plant leaves. Antioxidant capacity of the plant was introduced by using three different methods: DPPH radical scavenging activity, CUPRAC (Cupric Ion Reducing Antioxidant Capacity) activity and Reducing power activity.

Keywords : antioxidant activity, antioxidant capacity, *Raphanis raphanistrum* L., wild radish

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